In re Application of OSHINS et al.
Serial No. 09/558,469

Listing of the Claims:

1. (Currently amended) A computer-implemented method, comprising:

obtaining a description of a machine;

determining from the description whether cycles output by a resource require translation from one bus to another bus, and if so, providing a translator for the resource; and

dynamically configuring the resource for translating cycles based on the translator by providing a driver of the resource with data indicative of a cycle to issue on one bus when a cycle is received on another bus.

2. (Previously presented) The method of claim 1 wherein obtaining a description of machine hardware includes reading firmware information.

3. (Previously presented) The method of claim 1 wherein obtaining a description of machine hardware includes constructing a namespace.

4. (Previously presented) The method of claim 3 wherein determining from the description includes analyzing the namespace.

5. (Previously presented) The method of claim 4 wherein the machine is described in accordance with ACPI, and wherein determining from the description includes evaluating information in a current resources object.

6. (Previously presented) The method of claim 1 wherein determining from the description includes looking for address translation information in the description.

7. (Previously presented) The method of claim 1 wherein providing a translator for the resource includes returning a table of functions.

8. (Previously presented) The method of claim 1 wherein providing a translator for the resource includes performing a translation.

9. (Previously presented) The method of claim 1 wherein providing a translator for the resource includes returning type information.

10. (Previously presented) The method of claim 1 wherein the type information corresponds to I/O.

11. (Previously presented) The method of claim 1 wherein the type information corresponds to memory.

12. (Previously presented) The method of claim 1 further comprising locating the resource.

13. (Canceled)

14. (Currently amended) The method of claim 13 further comprising starting the resource.

15. (Currently amended) A system for configuring a resource to communicate with a device, comprising:

a bus bridge to which the device is connected,

a first component configured to analyze a description of the machine, and based on the description, to determine from the description whether cycles output by the resource require translation from one bus to another bus, and if so, to dynamically provide a translator to change a cycle type for the resource based on translation that will be performed at the bus bridge; and

a second component configured to obtain the translator from the first component, and further configured to tell the resource to output translated cycles based on information in the translator.

16. (Previously presented) The system of claim 15 wherein the bus bridge comprises a CPU to PCI bridge.

17. (Previously presented) The system of claim 15 wherein the bus bridge comprises a PCI to ISA bridge.

18. (Previously presented) The system of claim 15 wherein the first component comprises an ACPI driver.

19. (Previously presented) The system of claim 15 wherein the other component comprises an operating system component.

20. (Previously presented) The system of claim 19 wherein the other component comprises a Plug and Play component.

21. (Previously presented) The system of claim 15 wherein the description of the machine is provided in firmware information.

22. (Previously presented) The system of claim 21 wherein the first component constructs a namespace from the firmware information.

23. (Previously presented) The system of claim 15 wherein the first component performs a translation.

24. (Canceled)

25. (Canceled)

26. (Currently amended) The system of claim 15 ~~25~~ wherein the cycle type comprises I/O and is changed to memory.

27. (Currently amended) The system of claim 15 ~~25~~ wherein the cycle type comprises memory and is changed to I/O.

28. (Canceled)

29. (Currently amended) The method of claim 1 ~~28~~ wherein providing a driver of the resource with data comprises providing a translation value.

30. (Previously presented) The method of claim 29 wherein the translation value comprises a memory address offset.

31. (Currently amended) The method of claim 1 ~~28~~ wherein providing a driver of the resource with data comprises providing data to indicate that the cycle type will change between a memory bus cycle and an I/O bus cycle.

32. (Previously presented) A computer-readable medium having computer-executable instructions for performing the method of claim 1.

33. (Previously presented) A system for configuring a resource to communicate with a device, comprising:

a bus bridge to which the device is connected;

a first component configured to analyze a description of the machine, and based on the description, to provide a translator for the resource based on translation that will be performed at the bus bridge, the first component providing the translator to change a memory address; and

a second component configured to obtain the translator from the first component, and further configured to tell the resource to output cycles based on information in to the translator.

34. (Previously presented) The system of claim 33 wherein the bus bridge comprises a CPU to PCI bridge.

35. (Previously presented) The system of claim 33 wherein the bus bridge comprises a PCI to ISA bridge.

36. (Previously presented) The system of claim 33 wherein the first component comprises an ACPI driver.

37. (Previously presented) The system of claim 33 wherein the other component comprises an operating system component.

38. (Previously presented) The system of claim 33 wherein the description of the machine is provided in firmware information, and wherein the first component constructs a namespace from the firmware information.

39. (Previously presented) The system of claim 33 wherein the first component performs a translation.

40. (Previously presented) A system for configuring a resource to communicate with a device, comprising:

a bus bridge to which the device is connected;

a first component configured to analyze a description of the machine, and based on the description, to provide a translator for the resource based on translation that will be performed at the bus bridge, the first component providing the translator to change a cycle type; and

a second component configured to obtain the translator from the first component, and further configured to tell the resource to output cycles based on information in to the translator.

41. (Previously presented) The system of claim 40 wherein the cycle type comprises I/O and is changed to memory.

42. (Previously presented) The system of claim 40 wherein the cycle type comprises memory and is changed to I/O.

43. (Previously presented) The system of claim 40 wherein the bus bridge comprises a CPU to PCI bridge.

44. (Previously presented) The system of claim 40 wherein the bus bridge comprises a PCI to ISA bridge.

45. (Previously presented) The system of claim 40 wherein the first component comprises an ACPI driver.

46. (Previously presented) The system of claim 40 wherein the other component comprises an operating system component.

47. (Previously presented) The system of claim 40 wherein the description of the machine is provided in firmware information, and wherein the first component constructs a namespace from the firmware information.

48. (Previously presented) The system of claim 40 wherein the first component performs a translation.

49. (New) A system for configuring a resource to communicate with a device, comprising:

a bus bridge to which the device is connected,

a first component configured to analyze a description of the machine, and based on the description, to determine from the description whether cycles output by the resource require translation from one bus to another bus, and if so, to dynamically provide a translator to change a memory address for the resource based on translation that will be performed at the bus bridge; and

a second component configured to obtain the translator from the first component, and further configured to tell the resource to output translated cycles based on information in the translator.